

AMENDMENTS

(238) Figure 9B is a sectional view of a composite web or film now labeled 52 exiting electroplating process 34. It is seen by comparing ~~[figures]~~ Figures 9 and 9B that electroplating process 34 accomplishes electrodeposition of electrodeposit 50 onto a single sided surface of original web or film 38 comprising electrically conductive material 48. Surface 54 opposite electrodeposit 50 remains unplated.

(251) Figure 15 is a view similar to Figure 14 following exposure of the Figure 14 structure to an electroplating process such as that depicted in Figure 6. As with the structure in Figure 13, electrodeposit 66a has coated the exposed surface of material ~~[65A]~~ 65a extending to top surface 63a of insulating web 61a. Material 67 remains unplated in the view shown in Figure 15.

(274) A second way to achieve acceptably high driving potential at the growth front is to reduce the distance between the cathodic contact and the growth front. This decreases the distance over which current must be conveyed thereby reducing potential loss. This often happens in normal practice, wherein a very complicated combination of affecting parameters such as web speed, applied potential, bath and material chemistry, etc. effectively cause the growth front to “find its place” at some distance from the initial contact. Nevertheless, for optimum bath utilization, one may want to consider positioning the first cathodic contact as far “upstream” as practical in the process of Figure 22. This is shown in Figure 22A. In Figure 22A additional contact 94 is positioned slightly below point 85 where article 80 enters the electroplating process 90. In the embodiment of Figure ~~[22a]~~ 22A the article 80 shown is the same as article 80 used to describe the operation of the Figure 22 embodiment. It is understood that contact 94 is positioned sufficiently distant from entry point 85 such that the electrodeposit growth front on buss structure

114a is upstream (opposite web travel direction) of contact 94. Thus contact 94 is in electrical communication with conductive electrodeposited material. The distance between contact 94 and the electrodeposit growth front can vary depending on a number of factors including applied voltage, web speed, bath chemistry and the material and structure of buss 114a. Typically in order to maintain acceptable manufacturing tolerances regarding the linear growth front speed and to achieve an acceptable thickness of electrodeposit at contact point 94 the linear distance between entry point 85 and contact 94 would be typically of the magnitude of 10 inches.

(327) Figure 61 is a top plan view of the article produced by removing portions of the structure of Figure 60. The structure of Figure 61 is produced by slitting or otherwise cutting the web along the lines generally indicated by the dashed lines A and B of Figure [41] 60. One appreciates that holes 209 suffice to sever the electrical connection between inner and outer loop portions of the coil pattern. This effect of holes 209, to sever electrical connections, can be achieved by any number of methods such as laser cutting, ablation, grinding, punching etc.

(362) Figures 83 thru 87 present yet another embodiment of an article of the current invention. In Figure 83 a plastics processing operation generally referred to as injection molding is depicted. The injection molding process is well know in the art. In this process, polymer resin is fed to hopper 280 as indicated by directional arrow 282. The resin material is heated to achieve a fluid state in cylinder 284. First mold component 286 includes cavity 288 depicted in phantom. Second mold component 290 is moved in a reciprocating fashion as indicated by directional arrows 292. The mechanism accomplishing this reciprocating motion is well known in the art and is generally indicated in Figure 83 by 294. A material form 295 is fed from feed ~~[role]~~ roll 298 in an intermittent fashion coordinated with the open/close sequence of the mold and passed over exit roll 306. As will be shown below, in some embodiments this ~~[feed-material]~~